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INSECT PEST SURVEY

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X STATUS OF THE SOUTHWESTERN CORN BORER IN KANSAS,
OKLAHOMA, MISSOURI, AND ARKANSAS IN THE
FALL OF 1950^{1/}

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During the fall of 1950 a survey similar to those made in 1947, 1948, and 1949^{2/} was conducted in Kansas, Oklahoma, Missouri, and Arkansas, to determine the northern and eastern limits of distribution of the southwestern corn borer (Diatraea grandiosella Dyar), and also the intensity of infestation in portions of the older infested areas of Kansas and Oklahoma. In each county surveyed, 100 stalks of corn in each of one to nine fields were examined. In those counties along the lightly infested northern and eastern borders of infestation 100 stalks in each field were examined, and if no infestation was found, a circuit roughly 300 feet wide was made through the field in search of lodged stalks. Any lodged stalks thus seen were examined for girdling by the borer.

The northern limit of infestation was found to be much the same as in the fall of 1949 with the exception that no infestation was found in Rooks County, Kans., a county in which a trace of infestation was found in the fall of 1949. From the most northerly point of infestation in Ellsworth County, Kans., the limit of infestation ran in a southeasterly direction through Saline, Marion, Chase, Greenwood, and Wilson Counties. Infestation was found for the first time in Cherokee County, Kans., in the southeastern corner of that State.

^{1/} The information presented in this report was obtained by the Bureau of Entomology and Plant Quarantine in cooperation with the Kansas Agricultural Experiment Station.

^{2/} See Insect Pest Survey Special Supplements (1948, No. 1), (1948, No. 8), and (1950, No. 3).

Of special interest is the eastward extension of infestation into McDonald County, Mo., and into Franklin County, Ark. This is the first record of occurrence of the southwestern corn borer in Missouri, and marks an eastward advance of two counties during the past year. The infestation in Franklin County, Ark., is a first record of occurrence there and marks an eastward advance of one county during the past year. The limits of northward and eastward occurrence, and the intensity of infestation in the counties surveyed, as shown by the 1950 survey, are indicated in figure 1.

In most of the older infested areas surveyed, infestation was considerably higher than in 1949, indicating that the borer is re-establishing itself after the reduction in population caused by the severe winter of 1948-49. In the fall of 1949 only two of the counties surveyed averaged more than 50 percent of the stalks infested. In 1950 seven counties, (Barber in Kansas, and Kay, Muskogee, Okfuskee, Okmulgee, Pawnee, and Pittsburg in Oklahoma) averaged more than 50 percent of the stalks infested in the fields examined.

MO.

ARK.

OKLA.

KANS.

O - Surveyed, no borers found.

T - Trace, less than 1 percent of stalks infested.

1 to 25 percent of stalks infested.

More than 25 percent of stalks infested.

Unlettered and unshaded counties not surveyed.



